

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

**CLEAN AIR COUNCIL**

135 South 19<sup>th</sup> Street, Suite 300

Philadelphia, PA 19103

*Plaintiff,*

v.

**SHELL CHEMICAL APPALACHIA,  
LLC**

300 Frankfort Road

Monaca, PA 15061

*Defendant.*

Civil Action No. 2:23-cv-794

**COMPLAINT FOR DECLARATORY  
AND INJUNCTIVE RELIEF**

**AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF**

**STATEMENT OF THE CASE**

1. Clean Air Council (“Plaintiff” or the “Council”) files this citizen suit on behalf of its individual members against Shell Chemical Appalachia LLC (“Shell” or “Defendant”) to redress and prevent repeated and ongoing violations of the Clean Air Act, 42 U.S.C. § 7401 *et seq.* (“CAA”), and the Pennsylvania Air Pollution Control Act, 35 P.S. § 4001 *et seq.* (“APCA”), at Defendant’s Shell Polymers Monaca Site (the “Plant”), located at 300 Frankfort Road, Monaca, Beaver County, Pennsylvania 15061.

2. Shell has repeatedly violated, is violating, and will continue to violate the CAA, the APCA, the Pennsylvania State Implementation Plan (“SIP”), and plan approvals that authorize construction and operation of the Plant issued to Shell by the Pennsylvania Department of Environmental Protection (“DEP”) pursuant to the SIP.

3. Shell's violations include repeatedly exceeding the site-wide, 12-month rolling emissions limitations on volatile organic compounds ("VOCs") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

4. Shell is repeatedly exceeding the site-wide, 12-month rolling emissions limitations on nitrogen oxides ("NOx") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

5. Shell is repeatedly exceeding the site-wide, 12-month rolling emissions limitations on hazardous air pollutants ("HAPs") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

6. Shell is repeatedly exceeding the site-wide, 12-month rolling emissions limitations on carbon monoxide ("CO") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

7. Shell is repeatedly releasing prohibited visible emissions from the Plant's flares in violation of the CAA, APCA, the SIP and Shell's plan approvals.

8. Shell has generated and continues to generate benzene from facility waste at the Plant in excess of the limit in Shell's Plan Approvals.

9. Shell is violating the National Emissions Standards for Hazardous Air Pollutants ("NESHAPs") for Benzene Waste Operations ("BWON"), codified at 40 CFR Part 61 Subpart FF and promulgated pursuant to CAA Section 112, 42 U.S.C. § 7412, applicable to a facility with a total annual benzene quantity generated from facility waste ("TAB") of 10 megagrams (Mg) per year or greater.

10. Shell failed to disclose at least nine sources of benzene waste and more than 59 Mg/year of benzene waste compared to Shell's initial disclosure in an earlier report, in violation of the Benzene Waste Operations NESHAPs and Shell's plan approvals.

11. Shell is failing to operate and maintain the Plant in accordance with the representations Shell provided in Shell's application for the Plan Approvals regarding the total annual benzene quantity generated from facility waste.

12. Since January 10, 2022, Shell has reported 61 malfunction events to the Pennsylvania Department of Environmental Protection ("DEP"). Exhibit 18, Index of Malfunction Reports Submitted by Shell to DEP between January 10, 2022 and November 10, 2023.

13. The repeated and ongoing CAA and APCA violations at the Plant harm the health and disrupt the lives of the Council's members and other individuals who live, go to school, recreate, and work near the Plant.

14. Plaintiff is unaware of any actions Defendant has taken that are sufficient to eliminate future violations of the types alleged in this Complaint. Absent an appropriate order from this Court, Defendant will continue to release illegal air pollution and generate benzene waste in violation of the CAA and APCA as described in this Complaint. Plaintiff intends this action to encompass any post-Complaint violations of the type alleged herein.

15. The Environmental Protection Agency ("EPA") has not commenced and is not diligently prosecuting a civil action in federal or state court to require Shell to comply with the CAA. 42 U.S.C § 7604(b)(1)(B).

16. The DEP has not commenced and is not diligently prosecuting a civil action in federal or state court or in litigation before the Environmental Hearing Board to require Shell to comply with the CAA and APCA. 42 U.S.C § 7604(b)(1)(B); 35 P.S. § 4013.6(c).

## **CITIZEN SUIT PROVISIONS**

### **The Clean Air Act**

17. The purpose of the Clean Air Act is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” 42 U.S.C § 7401(b)(1).

18. The “citizen suit” provision of the CAA allows “any person [to] commence a civil action . . . against any person . . . who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of . . . an emission standard or limitation under this Act[.]” 42 U.S.C. § 7604(a)(1).

19. The CAA defines a “person” to include “an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof.” 42 U.S.C. § 7602(e).

20. An emissions standard or limitation is defined as any requirement under 42 U.S.C. § 7411 or § 7412, any condition or requirement applicable under a SIP approved by the EPA, any Title V permit, or any requirement to obtain a permit as a condition of operations. 42 U.S.C. § 7604(f).

21. The conditions and requirements in Shell’s plan approvals PA-04-00740A, PA-04-00740B, and PA-04-00740C (hereinafter “Plan Approvals”) were issued by DEP pursuant to a SIP approved by EPA and are federally enforceable emission standards or limitations as defined by the CAA citizen suit provision. 42 U.S.C § 7604(f).

**The Pennsylvania Air Pollution Control Act**

22. The APCA declared the policy of the Commonwealth of Pennsylvania to be “to protect the air resources of the Commonwealth to the degree necessary” for the “protection of public health, safety and well-being of its citizens,” “prevention of injury to plant and animal life and to property,” and the “implementation of the provisions of the Clean Air Act in this Commonwealth.” 35 P.S. § 4002(a).

23. The citizen suit provision of the APCA allows “any person [to] commence a civil action to compel compliance with [the APCA] or any rule, regulation, order or plan approval or permit issued pursuant to this act by any owner or operator alleged to be causing or contributing to a violation of any provision of this act or any plan approval, permit or order issued by the [DEP].” 35 P.S. § 4013.6(c).

24. The APCA defines a person to include any “individual, public or private corporation for profit or not for profit.” 35 P.S. § 4003.

25. Violations of Shell’s Plan Approvals, issued by DEP pursuant to the APCA, are subject to enforcement under the APCA citizen suit provision. 35 P.S. § 4013.6(c).

**JURISDICTION AND VENUE**

26. This Court has subject matter jurisdiction over this action pursuant to 42 U.S.C. § 7604(a) (regarding citizen suits under the CAA), 28 U.S.C. § 1331 (federal question jurisdiction), and supplemental jurisdiction regarding the APCA claims pursuant to 28 U.S.C. § 1367(a).

27. The citizen suit provision of the CAA grants jurisdiction to the United States District Courts to enforce emission standards or limitations of the CAA, to enjoin violations of the CAA, and to impose appropriate civil penalties. 42 U.S.C. § 7604(a). This Court may also award

costs of litigation, including reasonable attorney and expert witness fees as appropriate. 42 U.S.C. § 7604(d).

28. Pursuant to 28 U.S.C. § 2201(a), this Court may issue a declaratory judgment determining that Defendant has violated the CAA, as well as determining the number of violations Defendant has committed.

29. The Clean Air Act provides that any person who violates any such emission standard, limitation, or other permit condition or requirement may be assessed a civil penalty amount “per day for each violation.” 42 U.S.C. § 7413(b).

30. This Court may compel compliance with the APCA and award civil penalties for violations of the APCA. 35 P.S. §§ 4009.1, 4013.6(c). This Court may also award the costs of litigation, including attorney and expert witness fees. 35 P.S. § 4013.6(f).

31. This Court is the proper venue for this action because the Plant is located within this judicial district. 42 U.S.C. § 7604(c)(1); *see also* 28 U.S.C. § 1391(e) (federal venue provision).

32. After Plaintiff filed the First Complaint (ECF No. 1), Shell and DEP entered an Administrative Consent Order and Agreement (“COA”) on May 24, 2023. Exhibit 19, Administrative Consent Order and Agreement, *In the Matter Of Shell Chem. Appalachia, LLC* (DEP, May 24, 2023). The COA does not constitute a civil action in a court of the United States or a State or litigation before the Pennsylvania Environmental Hearing Board: the COA does not preclude a civil action under the CAA or APCA. *See* 42 U.S.C. § 7604(b)(1)(B); 35 P.S. § 4013.6(c).

## NOTICE

33. On February 2, 2023, Plaintiff provided written notice of repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 1, Notice of Intent to Sue Letter (Feb. 2, 2023) (“NOI Letter I”).

34. On February 17, 2023, Plaintiff provided written notice of additional, repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 2, Notice of Intent to Sue Letter (Feb. 17, 2023) (“NOI Letter II”).

35. On February 22, 2023, Plaintiff provided NOI Letters I and II via certified mail to Shell’s Agent for Service of Process located in Harrisburg, Pennsylvania. Exhibit 3, Letter to C.T. Corporation System (Feb. 22, 2023).

36. On July 6, 2023, Plaintiff provided written notice of additional, repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 20, Notice of Intent to Sue Letter (July 6, 2023) (“NOI Letter III”).

37. On August 30, 2023, Plaintiff provided written notice of additional, repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 21, Notice of Intent to Sue Letter (Aug. 30, 2023) (“NOI Letter IV”).

38. In accordance with the requirements of APCA and the CAA’s citizen suit provision and its implementing regulations, NOI Letters I, II, III, and IV included information sufficient to permit Defendant to identify the specific standards, limitations, or orders alleged to have been

violated, the activities alleged to be in violation, the person(s) responsible for the alleged violations, the location of the alleged violations, the likely dates of said violations, and the full names and addresses of the parties giving notice. 42 U.S.C. § 7604(b)(1)(A); 40 C.F.R. § 54.3; 35 P.S. § 4013.6(d).

39. NOI Letters I, II, III, and IV also provided written notice of violations of the emission limits and Plan Approval conditions described in the letters that occur after the date of the letter. Exhibits 1, 2, 20, and 21.

40. Plaintiff has satisfied the notice requirements of the CAA and APCA. More than 60 days have elapsed since Plaintiff served the required notice. 42 U.S.C. § 7604(b)(1); 40 C.F.R. Part 54; 35 P.S. § 4013.6(d).

41. Pursuant to the Clean Air Act's citizen suit provision, 42 U.S.C. § 7604(c)(3), Plaintiff has served a copy of the Complaint simultaneously upon the Attorney General of the United States and the EPA Administrator.

### **PARTIES**

42. Plaintiff Clean Air Council is a member-supported, Section 501(c)(3) non-profit environmental organization with thousands of members and offices located in Philadelphia and Pittsburgh, Pennsylvania, and Wilmington, Delaware. The Council serves the Mid-Atlantic region.

43. The Council is dedicated to protecting and defending everyone's right to a healthy environment. It works through a broad range of sustainability and public health initiatives, using public education, community action, government oversight, and enforcement of environmental laws. The Council has a long history of advocating for cleaner air in the Mid-Atlantic region.

44. One of the ways that the Council supports its members is by utilizing the Clean Air Act and other environmental laws to stop air pollution that threatens public health, impairs air



quality, harms the environment, and makes it more difficult for its members to live, work, go to school, and recreate in areas that are free from unsafe or illegal pollution. *See* Exhibit 4, Declaration of Eric Cheung.

45. Shell's illegal air pollution threatens public health and the environment and harms the interests of the Council and its members. *Id.*

46. The Council has more than 50 members who live in Beaver County, Pennsylvania. *Id.*

47. The Council's members include, for example, individuals who live, work, own property, or recreate between one half of a mile and six miles to the Plant, breathe in pollution from the Plant, and are concerned about the effects of the Plant's illegal emissions on their short- and long-term health and the short- and long-term health of their families, well-being, recreational interests, aesthetic interests, and property values. *Id.*

48. Members of the Council are exposed to the Plant's pollution and are harmed by the violations alleged in this Complaint. *Id.* Illegal air emissions, smoking flares, and malfunctions at the Plant have resulted in excess emissions of VOCs, NOx, particulate matter ("PM"), benzene, and other harmful pollution, which has diminished the Council's members' use and enjoyment of the areas where they live, work, own property, and recreate. *Id.*

49. The Council's members are concerned about the impact of the Plant's illegal pollution on their health and the health of their families. *Id.* These members see the Plant's flares and smell odors from the Plant and alter or restrict their daily activities in response. *Id.* In some cases, members have suffered headaches or felt nauseous when smelling odors from the Plant. *Id.*

50. The Council's members go outside, recreate, garden, and enjoy their properties less due to the illegal pollution from the Plant. *Id.* One member has chosen to delay starting a family

due to the illegal pollution from the Plant. *Id.* Some members fear they may be forced to move away from their current home due to impacts they and their families experience from illegal pollution from the Plant. *Id.*

51. A favorable decision in this case would rectify Defendant's noncompliance with certain laws, abate pollution from the operations of the Plant, and lead to improvements in air quality and redress the concerns of the Council's members.

52. The interests that Plaintiff seeks to protect are germane to its organizational purposes.

53. Neither the claims asserted nor the relief requested require the participation of Plaintiff's individual members in this action.

54. The Council is a non-profit corporation and a "person" under the CAA and APCA. 42 U.S.C. § 7602(e); 35 P.S. § 4003.

55. Defendant Shell, a subsidiary of Shell Oil Company, is a corporation that does business in the Commonwealth of Pennsylvania. Shell is the owner and operator of the Plant and is in control of the Plant's daily operations.

56. Shell is a "person" under the CAA, 42 U.S.C. § 7602(e), and APCA, 35 P.S. § 4003, and the applicable federal and state regulations alleged herein.

#### **SHELL POLYMERS MONACA PLANT**

57. The Shell Polymers Monaca Plant is a petrochemical complex that manufactures ethylene and polyethylene, which is used to create plastic products, including single-use plastics.

58. The Plant began producing polyethylene pellets in October 2022. Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Anna Hensel, District Supervisor, Air Quality Program, DEP Southwest Regional Office, *re: Emission Exceedance Report and*

*Mitigation Plan for Shell Chemical Appalachia LLC*, at 3 (Jan. 30, 2023) available at [https://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/Shell/3.20.23/Final\\_Shell\\_Chemical\\_Technical\\_Report\\_20230130.pdf](https://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/Shell/3.20.23/Final_Shell_Chemical_Technical_Report_20230130.pdf).

59. The Plant encompasses approximately 400 acres on the Ohio River in Beaver County, Pennsylvania, which is located about 30 miles northwest of Pittsburgh.

60. The Plant includes an ethane cracking unit, polyethylene unit, flares, incinerators, a wastewater treatment plant, and various other sources of air pollution. The Plant manufactures ethylene by “cracking” ethane through heating, pressure, and cooling.

61. The Plant manufactures polyethylene by combining ethylene with a related hydrocarbon called a co-monomer and a catalyst.

62. The Plant is capable of producing approximately 1,500,000 metric tons of ethylene and 1,600,000 metric tons of polyethylene each year.

63. The Plant’s flares are grouped into a high pressure (HP) flare system and a low pressure (LP) flare system. Exhibit 5, PA-04-00740C, Section D, Source ID Nos. 204, 205.

64. The HP flare system includes two enclosed ground flares and one elevated emergency flare that are meant to control emissions generated by the Plant’s ethylene and polyethylene manufacturing lines. Exhibit 6, Shell Polymers, “Shell Polymers Monaca Flare Minimization Plan” at 2, 5 (Sept. 2020).

65. The LP flare system includes three multi-point ground flares that are meant to control emissions generated by the Plant’s polyethylene manufacturing line, among other sources.

*Id.*

66. A flare is a combustion device that uses ambient air to burn and dispose of gases generated by industrial manufacturing processes. Flares are used at chemical manufacturing processes like the Plant and other types of industrial facilities.

67. Gas generated by facility operations that is directed to a flare for combustion is known as “vent gas.”

68. Flares are designed, in part, to achieve high combustion efficiency of VOCs and HAPs.

69. “Steam-assisted” flares inject steam (“assist-steam”) that is piped to the flare tip to assist in combustion. “Air-assisted” flares inject air via fans or other means to the flare tip to assist in combustion.

70. The Plant’s HP elevated flare is steam-assisted. Exhibit 6 at 6.

71. The Plant’s HP ground flares are not air-assisted or steam-assisted. *Id.*

72. The Plant’s LP multi-point ground flares are air-assisted. *Id.* at 10.

73. The steam-to-vent gas ratio is one operational parameter that gauges flare operation and combustion efficiency. The net heating value (“NHV”) of the gases in the combustion zone of a flare is another operational parameter that is used to evaluate flare combustion efficiency.

74. The Plant’s flares, incinerators, wastewater treatment plant, and other emission sources emit harmful air pollution, including VOCs, NO<sub>x</sub>, PM, CO, benzene, and other air pollutants.

75. The ethane cracking unit and other equipment at the Plant generate benzene waste.

76. VOCs are defined as any compound of carbon, excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in

atmospheric photochemical reactions, or in other words can react with sunlight and other substances like NO<sub>x</sub> to form ozone. 40 C.F.R. § 51.100(s).

77. “Because VOCs create strong odors, even relatively low levels of can cause eye, nose, and throat irritation, headaches, nosebleeds, fatigue (tiredness), nausea, and dizziness. Some people may experience an allergic skin reaction, such as itching, rashes, or hives. People with asthma and other lung illnesses may have their conditions aggravated by exposure to VOCs. Exposure to very high levels of VOCs may cause damage to the liver, kidney, or central nervous system (brain and spinal cord). High levels may also cause vision and memory problems.” Ohio Department of Health, *Volatile Organic Compounds* (January 2021); *see also* American Lung Association, *Volatile Organic Compounds*, <https://www.lung.org/clean-air/at-home/indoor-air-pollutants/volatile-organic-compounds> (last visited Nov. 13, 2023).

78. In addition, some VOCs, including benzene, are carcinogens. Benzene causes a variety of serious health problems including anemia, nervous system damage, suppression of immune systems, and leukemia. Agency for Toxic Substances and Disease Registry, *Benzene*, [https://www.atsdr.cdc.gov/sites/toxzine/benzene\\_toxzine.html](https://www.atsdr.cdc.gov/sites/toxzine/benzene_toxzine.html) (last visited Nov. 13, 2023).

79. Ozone exposure can cause numerous health problems in humans, especially respiratory problems, such as coughing, inflammation of and damage to the airways, aggravating lung diseases including asthma, emphysema, and chronic bronchitis, and can even be one of the causes of asthma. U.S. EPA, *Health Effects of Ozone Pollution*, available at <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> (last visited Nov. 13, 2023).

80. Exposure to nitrogen dioxide, a type of nitrogen oxide, is connected to adverse respiratory effects such as exacerbation of asthma and increased rates of asthma-related hospital

admissions and emergency department visits. U.S. EPA, *Review of the Primary National Ambient Air Quality Standards for Oxides of Nitrogen*, 83 Fed. Reg. 17226, 17227, 17234–36 (Apr. 18, 2018). Oxides of nitrogen also have adverse effects on vegetation, including decreasing growth and photosynthesis of plants exposed to oxides of nitrogen. U.S. EPA, *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, Final Rule, 77 Fed. Reg. 20218, 20224 (Apr. 3, 2012).

81. Nitrogen oxides react with ammonia to form fine particles smaller than 2.5 micrometers in diameter or smaller (“PM<sub>2.5</sub>”) emissions. U.S. EPA, *Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements*, Final Rule, 81 Fed. Reg. 58010, 58011 (Aug. 24, 2016).

82. Nitrogen oxides can also negatively affect visibility by making the air hazy and difficult to see through. U.S. EPA, *Basic Information about NO<sub>2</sub>*, <https://www.epa.gov/no2-pollution/basic-information-about-no2> (last visited Nov. 13, 2023). The presence of NO<sub>x</sub> can also lead to the formation of acid rain which can cause the acidification of surface water and resulting harm to aquatic and terrestrial ecosystems. U.S. EPA, *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, Final Rule, 77 Fed. Reg. 20218, 20224–25 (Apr. 3, 2012).

83. Black smoke from industrial flares like the flares at the Plant can contain PM and other HAPs. *See, e.g.*, U.S. EPA, *Standards of Performance for New Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, Final Rule, 63 Fed. Reg. 24436-01, 24437 (May 4, 1998). EPA has found, for example, that “smoking flares can contribute significantly to emissions of particulate matter 2.5 micrometers in diameter and smaller (PM<sub>2.5</sub>) emissions.” U.S. EPA, *National Emission Standards for*

*Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards Residual Risk and Technology Review for Ethylene Production*, Proposed Rule, 84 Fed. Reg. 54278-01, 54296 (Oct. 9, 2019).

84. PM is a mixture of solid or liquid particles, including organic materials, metals, and ash, which can cause serious health problems when inhaled. *See e.g.* U.S. EPA, *Particulate Matter (PM) Basics*, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics> (last visited Nov. 13, 2023). While exposure to PM of any size can present health risks, particle size is directly related to the potential for causing health problems, and PM<sub>2.5</sub> emissions pose the greatest risks due to their ability to penetrate deep into the lungs and enter the bloodstream. *See* U.S. EPA, *National Ambient Air Quality Standards for Particulate Matter*, Final Rule, 62 Fed. Reg. 38,652, 38,655–56 (July 18, 1997).

85. EPA has determined, based on a decades-long review of thousands of peer-reviewed studies and its own assessments, that there is a particularly strong causal link between both short- and long-term exposure to PM<sub>2.5</sub> emissions and a wide array of serious health risks, including acute and chronic respiratory issues (such as wheezing, difficulty breathing, aggravated asthma, reduced lung function, and chronic obstructive pulmonary disease), cardiovascular issues (such as clogged arteries, irregular heartbeat, congestive heart failure, heart attacks, and strokes), cancer, reproductive issues, and premature death. U.S. EPA, *National Ambient Air Quality Standards for Particulate Matter*, Final Rule, 78 Fed. Reg. 3086, 3103–04 (Jan. 15, 2013).

86. Risks from PM are especially high in vulnerable populations, such as children, the elderly, and those with preexisting heart or lung disease. *Id.* EPA has not identified any truly safe level of exposure to PM, and health risks generally increase in proportion to increases in PM concentration. *Id.* at 3109 (finding “a strong and robust body of evidence” of serious health effects

associated with long- and short-term exposure, even in areas with PM<sub>2.5</sub> concentrations below the daily and annual standards).

87. It is similarly well-established that reduced visibility and haze associated with air pollution are caused primarily by emissions of “particulate matter, especially fine particulate matter, from inadequate[ly] controlled sources.” U.S. EPA, *Regional Haze Regulations*, Final Rule, 64 Fed. Reg. 35714, 35715 (July 1, 1999) (quoting H.R. Rep. No. 95–294 at 204 (1977)).

88. Exposure to lower levels of CO is most serious for those who suffer from heart disease, and can cause chest pain, reduce the ability to exercise or, with repeated exposures, may contribute to other cardiovascular effects. U.S. EPA, *Basic Information About Carbon Monoxide (CO) Outdoor Air Pollution*, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects> (last visited Nov. 13, 2023). Exposure to high levels of CO can cause vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing tasks. Texas Commission on Environmental Quality, *Air Pollution from Carbon Monoxide*, <https://www.tceq.texas.gov/airquality/sip/criteria-pollutants/sip-co> (last visited Nov. 13, 2023).

## STATUTORY AND REGULATORY BACKGROUND

### **National Ambient Air Quality Standards and New Source Review**

#### General

89. The CAA directs EPA to establish national ambient air quality standards (“NAAQS”) for a number of “criteria pollutants” such as NO<sub>x</sub>—with nitrogen dioxide measured as the indicator of NO<sub>x</sub>—ozone, CO, and PM. 42 U.S.C § 7409; *see also* 40 C.F.R., Part 50. VOCs are implicated in the formation of ozone and thus are indirectly regulated as criteria pollutants.



90. EPA establishes primary ambient air quality standards for certain pollutants that, “allowing an adequate margin of safety, are requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), and secondary ambient air quality standards that are “requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.” 42 U.S.C. § 7409(b)(2).

91. With respect to each criteria pollutant, each air quality control region is classified as either in “attainment,” meaning that the area meets the primary or secondary NAAQS; in “nonattainment,” meaning that the area does not meet the primary or secondary NAAQSs; or “unclassifiable,” meaning that the area cannot be classified on the basis of available information. 42 U.S.C. § 7407.

#### State Implementation Plan

92. Under the CAA’s scheme of cooperative federalism, each state retains “primary responsibility for assuring air quality within the entire” state. 42 U.S.C. § 7407(a). States must adopt and submit to EPA for approval a “State Implementation Plan” (“SIP”), which is a set of laws and regulations that “specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained within each air quality control region in such State.” *Id.*; *see also* 42 U.S.C. § 7410.

93. Once EPA approves a state’s SIP, it is published in the Code of Federal Regulations and becomes enforceable under federal law. 42 U.S.C. §§ 7410, 7413; 40 C.F.R. § 52.23.

94. Among other things, SIPs must specifically set forth requirements for permitting programs and implement emission standards and limitations that assure geographic areas either achieve, regain, or remain in attainment status. *See* 42 U.S.C. §§ 7410; 7471; 7502(c).

95. EPA has approved Pennsylvania’s SIP, which is codified at 40 C.F.R. Part 52, Subpart NN, and referenced at 40 C.F.R. § 52.2020. Pennsylvania’s SIP incorporates EPA’s NAAQS by reference. 25 Pa. Code § 131.2.

96. Under the SIP, DEP is the agency tasked with issuing permits and implementing other federal CAA or EPA requirements.

#### New Source Review

97. Clean Air Act Section 110(a)(2)(C), 42 U.S.C. § 7410(a)(2)(C), requires that each SIP regulate the “modification and construction of any stationary source . . . as necessary to assure that [NAAQS] are achieved, including [via a required] permit program . . .” The Clean Air Act’s requirements for new or modified sources of criteria air pollutants are referred to as the “New Source Review” (“NSR”) program.

98. Under the CAA, a stationary source “means generally any source of an air pollutant except those emissions resulting directly [from a moving vehicle].” 42 U.S.C. § 7602(z). A stationary source is “major” if it emits more than 100 tons per year of a pollutant, though lower thresholds apply for certain pollutants that are located in geographic areas that do not meet federal air quality standards. *Id.* § 7602(j).

99. Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470–7492, sets forth the New Source Review requirements for preventing significant deterioration of air quality in geographic areas that are in “attainment” or “unclassifiable” status for NAAQS. 42 U.S.C. § 7470; 40 C.F.R. § 52.21. These requirements are referred to as the “Prevention of Significant Deterioration” (“PSD”) program.

100. Part D of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7501–7515, sets forth the New Source Review requirements in geographic areas that are not in attainment for NAAQS. These requirements are referred to as “Non-attainment New Source Review”.

101. Among other things, all proposed new major stationary sources of air pollutants and certain modifications to existing stationary sources must apply for and receive a permit that meets specific requirements prior to the commencement of construction. 42 U.S.C. §§ 7410(a)(2)(C), 7410(a)(2)(I); 7475(a); 7502(c); 40 C.F.R. § 52.21(j)–(r).

102. DEP established a permit program for newly constructed major stationary sources and certain modifications to stationary sources to control air pollution emissions in order to meet the requirements of the PSD program and Non-attainment New Source Review requirements under the Clean Air Act. 25 Pa. Code §§ 127.81–83, 127.201–218.

103. As part of this program, Pennsylvania must establish emissions limitations for criteria pollutants and other requirements for individual sources to ensure compliance with the requirements of the PSD program and Non-attainment New Source Review requirements. 42 U.S.C. § 7410(a)(2)(C).

104. EPA has approved Pennsylvania’s PSD and Non-attainment New Source Review permit programs. 40 C.F.R. § 52.2020.

### **New Source Performance Standards**

105. Clean Air Act Section 111(b)(1)(A), 42 U.S.C. § 7411(b)(1)(A), requires the EPA to publish and periodically revise a list of categories of stationary sources that, in the EPA’s judgment, cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. These categories correspond to distinct manufacturing processes or equipment within a given industry.

106. Once a category is included on the list, Clean Air Act Section 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B), requires the EPA to promulgate a federal “New Source Performance Standard” (“NSPS”) to regulate emissions from new sources within the category.

107. The Plant’s flares are subject to NSPS that prohibit visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours. 40 C.F.R. §§ 60.18(c)(1); 63.11(b)(4); Exhibit 5-1, Shell Polymers Monaca Plan Approval PA-04-00740C at Section D, Source 204 Condition No. 001, Source 205 Condition No. 001 (issued Oct. 3, 2023).

108. Flares that emit visible emissions for a total of more than five minutes during any two consecutive hours do not “destroy . . . VOC or volatile HAP with a destruction efficiency of 98% or greater.” 63 Fed. Reg. 24436-01, 24437 (May 4, 1998).

109. The Plant’s flares must also comply with certain design, monitoring, and operating requirements, including minimum net heating value requirements, designed to ensure flares reduce collected emissions by 98%. 40 C.F.R. §§ 60.18(c)–(f), 63.11(b); U.S. EPA, *Standards of Performance for New Stationary Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, Final Rule, 63 Fed. Reg. 24,436, 24,437 (May 4, 1998); Exhibit 5-1 at Section D, Source 204 Condition Nos. 008 and 009, Source 205 Condition Nos. 004 and 005.

### **National Emissions Standards for Hazardous Air Pollutants**

#### **Benzene Waste Operations: 40 CFR Part 61 Subpart FF**

110. Section 112 of the CAA sets out requirements for the regulation of sources of hazardous air pollutants. 42 U.S.C. § 7412. The EPA Administrator must establish a list of categories of major sources of hazardous air pollutants. 42 U.S.C. § 7412(c)(1). Under section 112(d), the Administrator must promulgate regulations establishing national emission standards

for each category or subcategory of major sources and area sources of hazardous air pollutants (“NESHAPs”). 42 U.S.C. §§ 7412(d)(1)-(3).

111. CAA Section 112(i), 42 U.S.C. § 7412(i), prohibits the operation of any source in violation of an applicable NESHAP.

112. EPA established NESHAPs for the Benzene Waste Operations category of sources of hazardous air pollutants, codified at 40 CFR Part 61 Subpart FF.

113. Chemical manufacturing plants are subject to the NESHAP for Benzene Waste Operations (“Subpart FF” or “BWON”). 40 C.F.R. § 61.340(a).

114. Among other kinds of facilities, chemical manufacturing plants include “facilities at which process units are operated to produce one or more of the following chemicals: . . . ethylene . . . .” 40 C.F.R. § 61.341.

115. Under Subpart FF, a facility must calculate the total annual benzene quantity generated from facility waste (“TAB”). 40 CFR § 61.355(a). Upon initial startup, an owner or operator must report a facility’s TAB “determined in accordance with § 61.355(a)” of Subpart FF. 40 C.F.R. § 61.357(a)(1).

116. If the TAB is over 10 megagrams (Mg) per year, the facility must select a control option that will require control of all or selected waste streams depending on the option selected. *See* 40 C.F.R. §§ 61.342 (c)-(e).

117. By “initial startup,” under the control option known as the “6 BQ Compliance Option,” a facility must control all benzene containing wastes except for up to 6.0 Mg/year of aqueous benzene-containing wastes. 40 C.F.R. §§ 61.342(b), (e).

118. Owners and operators are required to calculate the benzene quantity for controlled and uncontrolled waste streams to evaluate their compliance with the 6 BQ Compliance Option. 40 C.F.R. §§ 61.342(e)(2), 61.355(k).

119. Owners and operators must ensure that the following control equipment is designed to operate with the no detectable emissions (“NDE”) standard set forth in Subpart FF, defined as a reading of less than 500 parts per million by volume (“ppmv”) above background: the cover and all openings on the fixed-roof tanks; the cover and all openings on surface impoundments; the cover and all openings on each drain system opening; the cover and all openings on the fixed roof for each oil-water separator. 40 C.F.R. §§ 61.343(a)(1)(i)(A), 61.344(a)(1)(i)(A), 61.346(a)(1)(i)(A), 61.347(a)(1)(i)(A). This control equipment must be tested at least annually to demonstrate compliance with the NDE standard. 40 C.F.R. §§ 61.343(a)(1)(i)(A), 61.344(a)(1)(i)(A), 61.346(a)(1)(i)(A), 61.347(a)(1)(i)(A). Monitoring must comply with Method 21 from Appendix A of 40 C.F.R. Part 60. 40 C.F.R. § 61.355(h).

120. Engineering design documentation for all control equipment installed on the waste management unit must be prepared and maintained for the life of the control equipment. 40 C.F.R. § 61.356(d).

121. Unless implementing alternative standards, owners and operators must install, operate, and maintain a closed vent system that routes all organic vapors vented from tanks, surface impoundments, drain systems, and oil water separators to a control device. 40 C.F.R. §§ 61.343(a)(1), 61.344(a)(1), 61.346(a)(1), and 61.347(a)(1).

122. A control device is “an enclosed combustion device, vapor recovery system, or flare.” 40 C.F.R. § 61.341.

123. Owners and operators that use a control device other than a flare in accordance with 40 C.F.R. § 61.349 must demonstrate that each control device achieves specific conditions through engineering calculations or performance testing that meet certain criteria. 40 C.F.R. § 61.349(c).

124. Owners and operators that use a control device in accordance with 40 C.F.R. § 61.349 must “continuously monitor the control device[.]” 40 C.F.R. § 61.354(c). Among other monitoring requirements, a facility that uses a thermal vapor incinerator as a control device must install, calibrate, maintain, and operate “a temperature monitoring device equipped with a continuous recorder.” 40 C.F.R. § 61.354(c)(1).

125. A treatment process is “a stream stripping unit, thin-film evaporation unit, waste incinerator, or any other process used to comply with § 61.348[.]” 40 C.F.R. § 61.341.

126. Owners and operators must “design, install, operate and maintain a treatment process that either: (i) [r]emoves benzene from the waste stream to a level less than 10 parts per million by weight (ppmw) on a flow-weighted annual average basis, (ii) [r]emoves benzene from the waste stream by 99 percent or more on a mass basis, or (iii) [d]estroys benzene in the waste stream by incinerating the waste in a combustion unit that achieves a destruction efficiency of 99 percent or greater for benzene.” 40 C.F.R. §§ 61.348(a)(1)(i)-(iii).

127. Owners and operators must demonstrate that each treatment process or wastewater treatment system unit achieves these conditions through engineering calculations or performance testing unless the owner and operator demonstrate compliance with specific provisions of other federal regulations and meet certain criteria. 40 C.F.R. §§ 61.348(c)-(d).

128. Owners and operators must “monitor each treatment process or wastewater treatment system unit to ensure the unit is properly maintained[.]” 40 C.F.R. § 61.354(a). Specifically, the owner or operator must: (1) “[m]easure the benzene concentration of the waste

stream exiting the treatment process complying with § 61.348(a)(1)(i) at least once per month by collecting and analyzing one or more samples using the procedures specified in § 61.355(c)(3)” or (2) “[i]nstall, calibrate, operate, and maintain according to manufacturer's specifications equipment to continuously monitor and record a process parameter (or parameters) for the treatment process or wastewater treatment system unit that indicates proper system operation” and conduct daily inspections of the recorded data. *Id.*

129. By “initial startup” a facility with a TAB that is 10 Mg/year or greater must submit a “certification that the equipment necessary to comply with [Subpart FF] has been installed and that the required initial inspections or tests have been carried out in accordance with [Subpart FF].” 40 C.F.R. § 61.357(d)(1).

130. Beginning three months after the date of equipment certification, the facility must submit quarterly reports that include “a certification that all of the required inspections have been carried out in accordance with [Subpart FF]” and identifies periods of operation during which certain conditions occur, as applicable. 40 C.F.R. §§ 61.357(d)(6)-(7).

131. “A facility that uses a thermal vapor incinerator as a control device must report “[e]ach 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal vapor incinerator . . . is more than 28°C (50°F) below the design combustion zone temperature.” 40 C.F.R. § 61.357(d)(7)(iv)(A).

132. “Beginning on the date that the equipment necessary to comply with [Subpart FF] has been certified,” (“date of BWON equipment certification”) then annually thereafter, a facility with 10 Mg/year or greater TAB must submit “a report that updates the information” relating to a determination of TAB as required by 40 C.F.R. § 61.357(a). 40 C.F.R. § 61.357(d)(2).



133. Beginning one year after the date of BWON equipment certification, a facility with 10 Mg/year or greater TAB must submit an annual “report that summarizes all inspections required by [40 C.F.R.] §§ 61.342 through 61.354 during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.” 40 C.F.R. § 61.357(d)(8).

134. Facilities with a TAB of at least 10 Mg/year must also comply with other reporting and recordkeeping requirements. 40 CFR §§ 61.356, 61.357.

Ethylene Manufacturing: 40 CFR Part 63 Subparts XX and YY

135. EPA established NESHAPs for Source Categories: Generic Maximum Achievable Control Technology Standards, codified at 40 CFR Part 63 Subpart YY (“Subpart YY”), and NESHAPs for the Ethylene Manufacturing Process Units category of sources of hazardous air pollutants, codified at 40 CFR Part 63 Subpart XX (“Subpart XX”).

136. The ethylene production source category must comply with Subpart YY. 40 C.F.R. § 63.1103(e).

137. “Ethylene production or production unit means a chemical manufacturing process unit in which ethylene and/or propylene are produced by separation from petroleum refining process streams or by subjecting hydrocarbons to high temperatures in the presence of steam. The ethylene production unit includes the separation of ethylene and/or propylene from associated streams such as a C<sub>4</sub> product, pyrolysis gasoline, and pyrolysis fuel oil.” 40 C.F.R. § 63.1103(2).

138. Subpart YY requires owners or operators of processes that generate waste which contains benzene to comply with Subpart XX. 40 CFR § 63.1103(e), Table 7(g)(1).

139. Subpart XX applies to waste streams that are part of an ethylene production unit and requires compliance with Subpart FF for waste streams that contain benzene in addition to other requirements. 40 C.F.R. §§ 63.1081, 63.1095(b).

140. Facilities with a TAB of 10 Mg/year or more must “manage and treat waste streams” that contain benzene according to the benzene treatment options in the BWON Rule, 40 CFR §§ 61.342(c)(1)-(e) or transfer waste off-site. 40 C.F.R. § 63.1095(b)(2).

### **Enforcement of the CAA and APCA**

141. Plaintiffs may enforce violations of SIP provisions, including violations of construction and operation permits issued pursuant to the SIP. 42 U.S.C. § 7604(f); 35 P.S. § 4013.6(c).

142. The CAA and APCA authorize plaintiffs to bring a judicial enforcement action for a permanent or temporary injunction to address CAA and APCA violations, as well as to seek civil penalties. 42 U.S.C. § 7604(a); 35 P.S. §§ 4009.1, 4013.6(c).

143. Civil penalties for violations of the CAA are subject to a mandatory inflation adjustment under EPA’s 2023 Civil Monetary Penalty Inflation Rule, promulgated pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015. U.S. EPA, *Civil Monetary Penalty Inflation Adjustment*, Final Rule, 88 Fed. Reg. 986, 989 (Jan. 6, 2023).

144. Per these mandatory adjustments, which are codified in Tables 1 and 2 of 40 C.F.R. § 19.4, a defendant is liable for \$117,468 per day, per violation of the CAA occurring after November 2, 2015. *See* 40 C.F.R. § 19.4.

145. The APCA provides that any person who violates any such emission standard, limitation, or other permit condition or requirement may be assessed a civil penalty in the amount of \$25,000 “per day for each violation.” 35 P.S. § 4009.1(a).

146. In 1990, the CAA was explicitly amended to state that a violation may be “established by any credible evidence (including evidence other than the applicable test method).” 42 U.S.C.A. § 7413(e).

147. Pursuant to Section 7413(e), EPA’s 1997 Credible Evidence Revisions rule (“Credible Evidence Rule”) established that “EPA, States, *and citizens*” may “prosecute actions *based exclusively on any credible evidence*, without the need to rely on any data from a particular reference test.” U.S. EPA, *Credible Evidence Revisions*, Final Rule, 62 Fed. Reg. 8314, 8315–8316 (Feb. 24, 1997) (emphasis added), available at <https://www.govinfo.gov/content/pkg/FR-1997-02-24/pdf/97-4196.pdf>.

148. The Credible Evidence Rule states that “credible evidence” that can establish a source’s noncompliance include, *inter alia*, “engineering calculations, indirect estimates of emissions . . . continuous emissions monitoring (CEM) data and well-chosen parametric monitoring data, such as the operating temperature and air flow rate” of a unit. *Id.* at 8315.

149. Accordingly, 40 C.F.R. § 60.11(g) states that for the purpose of establishing whether or not a person has violated or is in violation of any standard in this part, “nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.”

**SHELL POLYMERS MONACA PLANT PLAN APPROVALS  
AND REPORTED EMISSIONS**

150. The Shell Plant is a stationary source within the meaning of the CAA, 42 U.S.C. § 7602(z), and is a major source of VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions for purposes of NSR. *See* Technical Review Memo from Melissa Jativa, DEP, to Air Quality Permit File PA-04-00740C, 10–13 (Sept. 22, 2020).

151. The Shell Plant is also a major source of HAPs and carbon dioxide equivalent (CO<sub>2</sub>e) emissions. Exhibit 19 at ¶ E.

152. All permits to construct and temporarily operate new major stationary sources of air pollution in Pennsylvania—called “plan approvals”—“must incorporate by reference the emission and performance standards and other requirements of the [APCA], the Clean Air Act” or the regulations adopted thereunder. 25 Pa. Code § 127.12b; *see* 35 P.S. § 4006.1(b)(2).

153. On January 18, 2015, DEP issued Plan Approval PA-04-00740A pursuant to the EPA approved SIP to Shell to authorize the construction and temporary operation of the Plant.

154. On February 18, 2021, DEP issued Plan Approval PA-04-00740B pursuant to the EPA approved SIP to Shell to authorize the installation and temporary operation of the sulfur hexafluoride (SF<sub>6</sub>)-insulated high voltage equipment associated with the cogeneration units of the Plant.

155. On February 18, 2021, DEP also issued Plan Approval PA-04-00740C pursuant to the EPA approved SIP to Shell to authorize “as built” changes in design and construction and to allow the continued construction and temporary operation of the Plant.

156. On September 15, 2022, DEP approved a 180-day extension of all three Plan Approvals until April 23, 2023.

157. On April 6, 2023, DEP approved a second 180-day extension of all three Plan Approvals until October 23, 2023.

158. On October 3, 2023, DEP approved a third 180-day extension of all three Plan Approvals until April 28, 2024. Exhibit 5-1.

159. Among other conditions, Shell is required to limit the Plant's site-wide VOC emissions to no more than 516.2 tons during any consecutive 12-month period. Exhibit 5-1, Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

160. Shell is required to limit the Plant's site-wide NOx emissions to no more than 328.5 tons during any consecutive 12-month period. *Id.* at Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

161. Shell is required to limit the Plant's site-wide HAPs emissions to no more than 32 tons during any consecutive 12-month period. *Id.* at Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

162. Shell is required to limit the Plant's site-wide CO emissions to no more than 983.7 tons during any consecutive 12-month period. *Id.* at Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

163. Shell is also required to restrict visible emissions from the Plant's flares and incinerators under the CAA and the Plan Approvals. The Plant must comply with these visible emission limits at all times. *Id.* at Section D, Source 205 Condition No. 001, Source 204 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

164. Shell is required to restrict visible emissions from the Plant's high-pressure ground flares and high-pressure emergency elevated flare to no more than "0% except for a total of five

minutes during any consecutive two-hour period.” Exhibit 5-1 at Section D, Source 205 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

165. Shell is required to restrict visible emissions from the Plant’s low-pressure multipoint ground flares to no more than “0% except for a total of five minutes during any consecutive two-hour period.” Exhibit 5-1 at Section D, Source 204 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

166. Shell is required to design and operate all flares to reduce collected VOC emissions by 98%. Exhibit 5-1 at Section D, Source 204 Condition No. 004, Source 205 Condition No. 002.

167. Shell must also comply with certain design, monitoring, and operating requirements, including minimum net heating value requirements, to ensure flares reduce collected VOC emissions by at least 98%. *Id.* at Section D, Source 204 Condition Nos. 008 and 009, Source 205 Condition Nos. 004 and 005; 40 C.F.R. §§ 60.18(c)–(f), 63.11(b); *see* U.S. EPA, *Standards of Performance for New Stationary Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, 63 Fed. Reg. 24,436, 24,437 (May 4, 1998).

168. Shell is required to design and operate the Spent Caustic Vent Incinerator (Source C206) to reduce collected VOC emissions by a minimum of 99%. Exhibit 5-1 at Section D, Source 206 Condition No. 003.

169. Shell is required to operate the Spent Caustic Vent Incinerator “at or above the minimum temperature at which at least 99% destruction efficiency is guaranteed by the manufacturer or demonstrated during performance testing.” Exhibit 5-1 at Section D, Source 206 Condition No. 007.

170. Shell is required to design and operate the Low Pressure Incinerator to reduce collected VOC emissions by a minimum of 99.9%. Exhibit 5-1 at Section D, Source 204 Condition No. 003.

171. Shell is required to operate the Low Pressure Incinerator “at or above the minimum temperature at which at least 99.9% destruction efficiency is guaranteed by the manufacturer or demonstrated during performance testing.” Exhibit 5-1 at Section D, Source 204 Condition No. 015.

172. Shell must comply with other testing, monitoring, and operating requirements to ensure incinerators achieve the required VOC destruction efficiency. *See* Exhibit 5-1 at Section D, Source 204 and Source 206.

173. Shell must provide DEP with statements of actual emissions of pollutants from the Plant for each reporting period, including NO<sub>x</sub>, VOC, HAP, and CO. Exhibit 5-1, Section C, Condition No. 16; *see* 25 Pa. Code §§ 127.12b–12c.

174. Shell’s actual emissions statements must describe “the method used to calculate the emissions and the time period over which the calculation is based.” Exhibit 5-1, Section C, Condition No. 16. “The statement shall also contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.” *Id.*

175. Shell submitted statements of actual emissions to DEP, including 12-monthly rolling emissions data for the Plant’s sources and permitted pollutants, on a monthly basis since at least November 7, 2022. Exhibit 7, Shell, 12-Month Rolling Emission Totals (received by DEP Nov. 7, 2022 through Apr. 21, 2023); Exhibit 7-1, Shell, 12-Month Rolling Emission Totals (received by DEP May 18, 2023 through Oct. 18, 2023). Each statement reports the Plant’s site-

wide emissions of air pollutants, including VOC, NO<sub>x</sub>, HAP, and CO, on a monthly and 12-month rolling basis. *Id.*

176. Prior to the monthly period ending January 31, 2023, Defendant calculated VOC emissions from flares using a destruction removal efficiency (“DRE”) below 99.55%. Exhibit 8, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *February 21, 2023 Monthly Submittal of Information Requested from Shell Chemical Appalachia LLC* (Feb. 21, 2023).

177. For the monthly period ending November 30, 2022, Defendant reported site-wide 12-month rolling VOC emissions for September 2022 as 522.982 tons; October 2022 as 666.296 tons; and November 2022 as 739.528 tons. Exhibit 7. For the monthly period ending December 31, 2022, Defendant reported site-wide, 12-month rolling VOC emissions for December 2022 as 741.462 tons. *Id.*

178. On December 14, 2022, DEP issued a NOV to Shell for violating the site-wide, 12-month rolling VOC limit in September 2022 and October 2022. Exhibit 1 at Exhibit A. On February 13, 2023, DEP issued a NOV to Shell for violating the site-wide, 12-month rolling VOC limit in November of 2022. Exhibit 2 at Exhibit A.

179. After DEP issued the first NOV for violations of the site-wide, 12-month rolling VOC limit on December 14, 2022, Shell claims to have conducted two tests and one measurement of a flaring event, lasting approximately one hour or less each, on the northern most totally enclosed ground flare on January 13, 2023, January 19, 2023, and January 20, 2023. Exhibit 9, Providence Photonics, *Shell Monaca FlareGuardian<sup>TM</sup> Field Study—Final Report* (Jan. 2023).



180. Shell claims that the test performed on the northern most totally enclosed ground flare on January 13, 2023 from 1:45 PM to 1:53 PM measured average DRE at 98.24%. *Id.* Shell claims that the test performed on the same flare on January 19, 2023 from 11:25 AM to 12:23 PM measured average DRE at 99.55%. *Id.* Shell claims that the measurement from the flaring event on the same flare on January 20, 2023 from 8:03 AM to 9:02 AM measured average DRE at 99.62%. *Id.*

181. Beginning with the statement of actual emissions for the monthly period ending January 31, 2023, through the report Shell submitted to DEP on April 21, 2023, Defendant calculated VOC emissions from flares using a 99.55% DRE for the current and historic emissions periods based on the results of the January 19, 2023 test. Exhibits 8 and 9.

182. Beginning with the statement of actual emissions for the monthly period ending January 31, 2023 through the report Shell submitted to DEP on April 21, 2023, Defendant retroactively revised its emission reports dating back to at least September 2022 using a 99.55% DRE to purportedly demonstrate that Defendant has not exceeded the 12-month rolling emission limit for VOCs.

<b>Month</b>	<b>Reported VOC Emissions (tons/12-month period)</b>	<b>Revised VOC Emissions Jan. 31, 2023 (tons/12-month period)</b>
September 2022	522.982	236.859
October 2022	666.296	308.112
November 2022	739.528	354.434
December 2022	741.462	372.230

Exhibit 7.

183. Despite requests from Plaintiff, Shell has not provided data related to all operational parameters that impact DRE for the northern most totally enclosed ground flare during the time of the January 2023 tests.

184. On April 6, 2023, DEP stated that, with respect to VOC emission totals, “Shell has not demonstrated that [the January 2023 tests] are appropriate. The Department has not accepted these test results.” Exhibit 10, DEP, Notices of Violation to Shell for “12-Month Rolling Emissions Exceedances through January 2023” and “12-Month Rolling Emissions Exceedances through February 2023” (Apr. 6, 2023).

185. On May 24, 2023, DEP stated that DEP “does not accept” the January 2023 test results or subsequent bench test “as an alternative to the manufacturer’s guarantees” for destruction efficiencies. Exhibit 19 at ¶ V.

186. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on one-hour test for a single flare for emission periods after the January 19, 2023 test.

187. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on a one-hour test for a single flare for emission periods prior to the January 19, 2023 test.

188. In the monthly statements of actual emissions that Shell submitted to DEP between November 7, 2022 and April 21, 2023, Shell did not report emissions of HAPs above the twelve-month rolling HAP emission limitation for any 12-month period. Exhibits 7 and 7-1.

189. On May 18, 2023, Shell submitted a revised statement of actual emissions to DEP for the monthly period ending March 31, 2023. Exhibit 7-1. Among other revisions, Shell retroactively increased Shell’s reported HAPs emissions above the twelve-month rolling emission limit for the periods ending between December 31, 2022 and March 31, 2023.

<b>Month</b>	<b>Reported HAP Emissions Apr. 21, 2023 (tons/12-month period)</b>	<b>Revised HAP Emissions May 18, 2023 (tons/12-month period)</b>
December 2022	11.861	32.936
January 2023	13.104	35.704
February 2023	16.121	40.311
March 2023	17.042	42.915

Exhibits 7 and 7-1.

190. Shell has agreed that Shell violated the twelve-month rolling emission limitations for VOC, NO<sub>x</sub>, HAP, and CO emissions for the periods ending in the following months:

- a. VOC: October 2022, November 2022, December 2022, January 2023, February 2023, March 2023, and April 2023.
- b. NO<sub>x</sub>: December 2022, January 2023, February 2023, March 2023, and April 2023.
- c. HAP: December 2022, January 2023, February 2023, March 2023, and April 2023.
- d. CO: February 2023, March 2023, and April 2023.

Exhibit 19 at ¶¶ Q, 2.a.

191. Shell must notify DEP each time a malfunction event occurs at the Plant including prohibited visible emissions. Exhibit 5-1, Section C, Condition No. 18. Malfunction events are defined by Shell's Plan Approval to include, among other things, "any sudden, infrequent, and not reasonably preventable failure of air pollution control or monitoring equipment[.]" *Id.* "[H]eavy smoke" is one example of a malfunction event. *Id.* Shell must notify DEP of malfunctions by phone "no later than the next business day after discovery" and by written report no later than thirty days following the end of a malfunction. *Id.*

192. Shell's written malfunction reports must include, among other information, "[t]he date and time that the malfunction started and ended . . . [and] [a]n estimate of the emissions

associated with the malfunction and the calculations that were used to determine that quantity[.]”  
*Id.*

193. Shell has submitted malfunction reports documenting violations of the prohibition on visible emissions from various flares to DEP. Exhibit 1 at Exhibit D; Exhibit 22, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, Re: *PA-04-00740C Source ID 205 High Pressure Header System Visible Emissions Malfunction Report* (Apr. 25, 2023) and (June 22, 2023); Re: *PA-04-00740C Ethylene Manufacturing Line (Source ID 201), HP Ground Flares (Source IDs C205A and C205B), and HP Elevated Flare (Source ID C205C) Visible and Excess Emissions Malfunction Report* (Aug. 9, 2023); Re: *PA-04-00740C LP Multipoint Ground Flare Visible and Excess Emissions Malfunction Report* (Aug. 10, 2023); Re: *PA-04-00740C Polyethylene Manufacturing Lines (Source ID 202), Low Pressure (LP) Header System (Source ID 204) Visible and Excess Emissions Malfunction Report* (Aug. 29, 2023); and Re: *PA-04-00740C Polyethylene Manufacturing Lines (Source ID 202), Low Pressure (LP) Header System (Source ID 204) Visible and Excess Emissions Malfunction Report* (Sept. 28, 2023); Re: *PA-04-00740C LP Multipoint Ground Flare (C204B) Ethylene Header Visible Emissions Follow Up Report* (Oct. 27, 2023); Re: *PA-04-00740C Ethylene Manufacturing Line (Source ID 201), HP Ground Flares (Source IDs C205A and C205B), and HP Elevated Flare (Source ID C205C) Visible and Excess Emissions Malfunction Follow Up Report* (Oct. 29, 2023); Re: *PA-04-00740C LP Multipoint Ground Flare (C204B) Ethylene Header Visible and Excess Emissions Malfunction Report* (Nov. 10, 2023).

194. Shell has acknowledged that Shell violated the visible emissions limitations applicable to Shell’s flares under the Plan Approval on the following dates:

- a. HP Elevated Flare: September 18, 2022 and February 13, 2023;
- b. HP Totally Enclosed Ground Flares: September 6, 2022; September 8, 2022; September 13, 2022; February 13, 2023; March 25, 2023; and April 5, 2023;
- c. LP Multi-Point Ground Flare: June 23, 2022.

Exhibit 19 at ¶¶ AA-JJ, LL, and 2.a.

### **BENZENE WASTE OPERATIONS**

195. Benzene is a VOC and a HAP, and benzene emissions from the wastewater treatment plant and other sources at the Plant are limited by the site-wide, 12-month rolling emission limits for VOCs and HAPs.

196. In addition to complying with site-wide, 12-month rolling air emission limitations for VOCs and HAPs, Shell shall also ensure that “total benzene quantity from facility waste shall not equal or exceed 11 tons per year as determined through 40 C.F.R. § 61.355[.]” Exhibit 5-1 at Section C, No. 008.

197. Shell’s Plan Approval requires compliance with Subpart FF and Subpart YY. *See* Exhibit 5-1, at Section C, Nos. 045, 010, 012, 015, 022 and Section E, Nos. 007 – 012.

198. Among other things, Shell’s Plan Approval states that Shell must comply with applicable BWON rules for determination of TAB, monitoring, recordkeeping, and reporting. Exhibit 5-1 at Section C, Nos. 010, 012, 015, 022.

199. Shell shall ensure that the Plant is “operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the department.” 25 Pa. Code § 127.25; Exhibit 5-1 at Section B, No. 13; *see* 61 Fed. Reg. 39597 (July 30, 1996).

200. In 2015, Shell disclosed in Shell’s application for Plan Approval PA-04-00740A that “Shell will design and operate the facility such that the total annual benzene quantity from the

facility waste will be less than 11 tons per year (i.e., 10 mega grams) for the facility.” Exhibit 21 at Exhibit A.

201. Shell stated that the “initial start-up” date for the ethylene manufacturing facility was September 24, 2022. Exhibit 23, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Director, U.S. E.P.A. Region III Air Protection Section, *et al.*, Re: *Plan Approvals PA-04-00740A & C, Source ID 201 – Ethylene Manufacturing Line, 40 CFR Part 63 Subpart YY, Notice of Compliance Status Report* (May 21, 2023).

202. On December 23, 2022, Shell submitted what it characterized as “the required initial report for 40 CFR Part 61, Subpart FF” to DEP, reporting that “Shell is below the 1.0 Mg/year total annual benzene (TAB) quantity threshold.” Exhibit 21 at Exhibit B.

203. On April 18, 2023, Shell submitted a report to DEP that added nine additional points of benzene waste generation to the list of sources compared to the initial report and disclosed that Shell’s TAB is actually 59.22 Mg/year. Exhibit 21 at Exhibit C.

204. Among other things, Shell disclosed annual benzene quantities of over 50 Mg/year generated from two spent caustic separators, collectively, and 3.9 Mg/year generated from a gasoline/H<sub>2</sub>O (i.e., oil/water) separator in the April 18, 2023 report that it did not disclose in the December 23, 2022 report. *Id.*

205. On April 18, 2023, Shell stated that Shell elected the 6 BQ compliance option and “certif[ied] that the equipment necessary to comply with applicable BWON wastewater provisions have been installed.” Exhibit 21 at Exhibit C.

206. On May 2, 2023, Shell installed a temporary WEMCO Depurator (“WEMCO 120X DAF”) to remove benzene and other hydrocarbons from wastewater from the Flow Equalization & Oil Recovery Tanks (Source 401) before the wastewater is discharged to the Plant’s biotreaters

in the wastewater treatment plant. Exhibit 24 Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Elizabeth Speicher, Environmental Group Manager, DEP Southwest Regional Office, Re: *Plan Approval No. 04-00740C Request for Control Plan* (Apr. 26, 2023); Exhibit 25 Request for Determination of Requirement for Plan Approval/Operating Permit (RFD) No. 10119 – Determination Issued by DEP Air Quality Division (Apr. 10, 2023); and Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Sheri Guerrieri, New Source Review Chief, DEP Southwest Regional Office, Re: *Request for Determination, Temporary Induced Air Flotation System* (Mar. 7, 2023); Exhibit 26 Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Elizabeth Speicher, Environmental Group Manager, DEP Southwest Regional Office, Re: *Plan Approval No. 04-00740C Response to Notice of Violation and Request for Benzene Waste NESHAP Control Plan* (Sept. 25, 2023).

207. The authorization for the temporary WEMCO 120X DAF is 180 days. Exhibit 25.

208. The off-gas from the temporary WEMCO 120X DAF is routed to the existing Spent Caustic Vent Incinerator (Source C206). The separated hydrocarbons were piped to the existing Flow Equalization & Oil Recovery (“FEOR”) Tanks (Source 401) and the emissions are routed to the Spent Caustic Vent Incinerator (Source C206). Exhibit 25.

209. On August 20, 2023, Shell submitted a document titled “SPM Wastewater treatment Plant Controls Implementation” to DEP (“WWTP Report”). Exhibit 27 Shell, “SPM Wastewater Treatment Plant Controls Implementation” (Aug. 20, 2023).

210. In the WWTP Report, Shell stated that “[d]uring startup and initial operation of the Ethane Cracking Unit (ECU) it was determined that the wastewater stream generated from the ECU had some elevations in Oil & Grease (O&G) and Volatile Organic Compound (VOC)

concentrations exceeding the design basis for the Biotreater, which resulted in occasional VOC emissions on top of the biotreater's aeration basins and an oil sheen." *Id.* at 3.

211. In the WWTP Report, Shell states that the "[p]erformance of the temporary flotation unit is being used as a proof of concept for of [sic] a permanent installation to ensure that the selected flotation technology will provide sufficient O&G and VOC removal." *Id.* at 7.

212. The WWTP notes that Shell intends to add additional permanent controls to "provid[e] more robust engineered controls to manage any potentially higher than expected oil & grease (O&G) and [VOC] levels in the wastewater coming from the ethylene cracker unit (ECU)." *Id.* at 7.

213. As of August 20, 2023, Shell had not completed testing of the WEMCO 120X DAF during the full range of operating conditions at the plant. *Id.* at 11; Exhibit 28, Request for Determination of Requirement for Plan Approval/Operating Permit (RFD) No. 10277 – Determination Issued by DEP Air Quality Division (Aug. 9, 2023); and Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Sheri Guerrieri, New Source Review Chief, DEP Southwest Regional Office, Re: *Revised Request for Determination (RFD # 10277) Temporary Induced Air Flotation System* (July 28, 2023).

214. Shell received authorization from DEP to replace the temporary WEMCO 120X DAF with a temporary WEMCO 84 DAF and an Enviro-Cell (EC-15) Induced Air Flotation (IAF) unit on August 9, 2023. Exhibit 28.

215. The WEMCO 84 DAF and IAF were to be installed to remove hydrocarbons from wastewater discharged from the FEOR tanks (Source 401) before the wastewater is routed to the bioreactors in the wastewater treatment plant. Exhibit 28.



216. The off-gas from the DAF and IAF were to be routed to the Spent Caustic Thermal Oxidizer. The hydrocarbons were to be sent to the FEOR tanks and emissions piped to the Spent Caustic Vent Incinerator. Exhibit 28.

217. In the WWTP Report, Shell stated Shell estimates that the initial startup of permanent controls to remove VOCs and oil and grease from wastewater from the FEOR Tanks (Source 401) will not take place until the second half of 2026. Exhibit 27 at 9.

218. On July 27, 2023, Shell submitted a quarterly inspection report required by 40 C.F.R. § 613.357(d)(6) and (7). Exhibit 29 Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Director, U.S. E.P.A. Region III Air Protection Section, *et al.*, Re: *National Emission Standard for Benzene Waste Operations 40 CFR Part 61 Subpart FF Quarterly Inspection Report, Reporting Period: April 18, 2023 through June 30, 2023* (July 27, 2023).

219. On July 27, 2023, Shell identified the following “BWON applicable units/equipment”: Spent Caustic Stripper (C-13501); Process Water Stripper (C-13001); Spent Caustic Storage Tank (T-53501); Recovered Oil Storage Tank (T-59708); FEOR Tank A (T-59707A); FEOR Tank B (T-59707B); Spent Caustic Thermal Oxidizer (A-53501); and the Closed Vent System to the SCTO. *Id.*

220. As of July 27, 2023, Shell had not yet conducted performance testing or destruction efficiency testing for the Spent Caustic Vent Incinerator. *Id.*; Exhibit 23 at 4.

221. In the July 27, 2023 report, Shell reported that the Spent Caustic Vent Incinerator was down between June 24, 2023 at 17:35 through June 28, 2023 at 1:45. Exhibit 29.

222. In the July 27, 2023 report, Shell states that “[t]he ‘design’ combustion temperature from the manufacturer is listed as 870° C to ensure a destruction efficiency of 99.9%” for VOCs for the Spent Caustic Vent Incinerator. Exhibit 29 at 3.

223. In the July 27, 2023 report, Shell reported 110 instances where the 3-hour combustion zone temperature was below the manufacturer's design temperature of 870° C between April 18, 2023 and June 30, 2023. Exhibit 29 at 3.

224. Shell stated that Shell did not timely conduct an initial and a quarterly visual inspection required by the NESHAP for Benzene Waste Operations of the Spent Caustic Thermal Oxidizer, Spent Caustic Stripper, and Process Water Stripper during the Fourth Quarter of 2022 and the First Quarter of 2023. Exhibit 23.

225. Shell stated that it did not submit two quarterly reports required by the NESHAP for Benzene Waste Operations related to the operation of the Spent Caustic Thermal Oxidizer, Spent Caustic Stripper, and Process Water Stripper during the Fourth Quarter of 2022. Exhibit 23.

226. On September 11, 2023, after Plaintiff sent its August 30, 2023 letter providing notice of violations related to the generation of benzene waste, DEP issued a NOV for Shell's violation of the Plan Approval requirement that "total benzene quantity from facility waste shall not equal or exceed 11 tons per year as determined through 40 CFR §61.355." Exhibit 30 Pennsylvania Department of Environmental Protection, Notice of Violation to Shell for "Benzene Waste Exceedance" (Sept. 11, 2023); Exhibit 31 Scott Beaudway, Air Quality Specialist, Air Quality Program, DEP Southwest Regional Office, to Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, Request for Control Plan: Benzene Waste Exceedance (Sept. 11, 2023).

227. On September 25, 2023, in response to the NOV, Shell stated that Shell's "TABQ [is] greater than 10 Mg/yr, violating PA-04-00740C, Section C, Condition #008." Exhibit 26.

228. Shell stated that it did not include all wastestreams in Shell's December 23, 2022 report to DEP. Exhibit 26; *see* Exhibit 21 at Exhibit B.

229. Shell stated that Shell did not include benzene waste from the Plant's Spent Caustic Stripper in the December 23, 2022 TAB report. Exhibit 23 at 3.

230. Shell states that the December 23, 2022 TAB report "only included turnaround waste and it should have included process waste streams[.]" Exhibit 23 at 3.

231. On September 25, 2023, Shell stated Shell is "planning to sample various waste streams to continue to strengthen the TABQ and accurately quantify the 6BQ." Exhibit 23 at 3-4.

232. Since the initial startup of the ethylene production unit on September 24, 2022, Shell has reported at least 7 malfunctions associated with the following equipment: Spent Caustic Vent Incinerator, FEOR Tanks, Recovered Oil Storage Tank, Spent Caustic Storage Tank, WEMCO DAF, and Biotreaters. Exhibit 11; Exhibit 32, Index of Malfunction Reports Submitted by Shell to DEP between July 15, 2022 and Nov. 6, 2023 Relating to BWON Equipment; Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, Re: *Source ID 206 Spent Caustic Vent Header System Visible Emissions Malfunction Report, July 4, 2022* (July 15, 2022); Re: *Source ID 206 Spent Caustic Vent Header System Visible Emissions and Source ID 205 High Pressure (HP) Header System Malfunction Final Report* (Aug. 17, 2022); Re: *Spent Caustic Vent Incinerator (Source ID 206) and Storage Tanks (Recovered Oil, Equalization Wastewater, and Spent caustic) (Source IDs 401 and 402) Excess Emissions Malfunction Report* (Feb. 9, 2023); Re: *Malfunction Report as per PA-04-00740C and National Response Center Report Incident ID# 1364790 for Malodors and Excess Emissions from Wastewater Treatment Plant (WWTP)* (May 18, 2023); Re: *Spent Caustic Vent Incinerator (Source ID C206), Storage Tanks (Recovered Oil, Equalization Wastewater, and Spent Caustic) (Source IDs 401 and 402), and WEMCO Depurator (Source ID 505) Excess Emissions Malfunction Report* (July 26, 2023); Re: *Spent Caustic Vent*

*Incinerator (Source ID C206), Storage Tanks (Recovered Oil, Equalization Wastewater, and Spent Caustic) (Source IDs 401 and 402), and WEMCO Depurator (Source ID 505) Excess Emissions Malfunction Report (Sept. 8, 2023); Re: Recovered Oil and Equalization Wastewater Storage Tanks (Source ID 401) Excess Emissions Malfunction Report (Sept. 27, 2023); Re: Recovered Oil and Equalization Wastewater and Spent Caustic Storage Tanks (Source IDs 401 and 402) and WEMCO Depurator (Source ID 505) Excess Emissions Malfunction Report (Nov. 6, 2023); Voicemail (transcribed via email) from Lauren Uffelman, Shell Polymers Monaca, to Aaron Zrimsek, DEP (Sept. 12, 2023) (downtime of WEMCO Depurator Unit).*

233. Shell has submitted malfunction reports documenting malodors and excess benzene and other pollutants from the wastewater treatment plant. Exhibit 11, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *Re: PA-04-00740C Wastewater Treatment Plant (Source ID 502) Malodor and Excess Emissions Malfunction Report (Jan. 13, 2023), and Re: Malfunction Report as per PA-04-00740C Malodors from Wastewater Treatment Plant (WWTP) Shell Chemical Appalachia (Mar. 27, 2023); Exhibit 32.*

234. On April 14, 2023, Shell initially reported that Shell released 300 pounds of benzene to the air from the wastewater treatment plant. National Response Center, Incident No. 1364790 (April 14, 2023), available at <https://nrc.uscg.mil/>.

235. On May 18, 2023, Shell reported that Shell released 444 pounds of excess benzene emissions to the air from the wastewater treatment plant between April 11, 2023 at 14:30 and April 20, 2023 at 15:00 when a malodor was last detected offsite. Exhibit 32.

236. On January 13, 2023, Shell reported that it released approximately 2 tons of benzene from the wastewater treatment plant between October 4, 2022 and December 13, 2022. Exhibit 11.

237. Shell conducts bi-weekly passive sampling for benzene, n-Hexane, 1-3 Butadiene, Toluene, and Napthalene at twenty (20) monitoring locations along the Plant's fenceline. Shell also uses Photo Ionization Detector ("PID") Analyzers at four (4) locations at the Plant to measure Non-Methane Non-Ethane VOC ("NMNEVOC"). When certain levels of NMNEVOC are exceeded, Shell uses a Summa Canister to sample for benzene, n-Hexane, 1-3 Butadiene, Toluene, and Napthalene.

238. On three separate occasions, monitors located along the Plant's fenceline recorded two-week average concentrations of benzene that exceeded 9 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Exhibit 12, Shell, Passive Air Monitoring System ("PAMS") Concentration Data (Bi-weekly) for Oct. 11, 2022, Feb. 15, 2022, and Apr. 13, 2023.

239. For context, federal rules require petroleum refineries to take action to investigate and reduce benzene emissions where fenceline benzene concentrations exceed an annual average of 9  $\mu\text{g}/\text{m}^3$ . 40 C.F.R. § 63.658. The U.S. Agency for Toxic Substances Disease Registry's ("ATSDR") Minimal Risk Level ("MRL") for benzene is 29  $\mu\text{g}/\text{m}^3$ . Agency for Toxic Substances and Disease Registry, Minimal Risk Levels for (MRLs) for Hazardous Substances (August 2022), available at <https://wwwn.cdc.gov/TSP/MRLS/mrlslisting.aspx>. The ATSDR estimates that exposure to benzene concentrations above 29  $\mu\text{g}/\text{m}^3$  for as little as 24 hours can increase the risk of noncancerous health effects like a weakened immune system. *Id.* California has determined that continuous or repeated eight-hours exposures to benzene concentrations above 3  $\mu\text{g}/\text{m}^3$  over several years could increase the risk of noncancerous health effects, such as damage to blood cells

and a weakened immune system. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, “Benzene Reference Exposure Levels: Technical Support Document for the Derivation of Noncancer Reference Exposure Levels Appendix D1” (Jun. 2014) available at: <https://oehha.ca.gov/media/downloads/crn/benzenerelsjune2014.pdf>.

240. For the two-week period ending April 13, 2023, the average concentration at one monitor at the Plant’s fenceline was  $110 \mu\text{g}/\text{m}^3$ . Exhibit 12. Ten additional monitors located along the Plant’s fenceline recorded concentrations above  $9 \mu\text{g}/\text{m}^3$ , ranging from  $10 \mu\text{g}/\text{m}^3$  to  $47 \mu\text{g}/\text{m}^3$ . *Id.* For the two-week period ending February 15, 2023, the average concentration at one monitor at the Plant’s fenceline was  $35 \mu\text{g}/\text{m}^3$ . *Id.* For the two-week period ending October 11, 2022, one fenceline monitor recorded an average concentration of  $180 \mu\text{g}/\text{m}^3$ . *Id.*

241. On April 11, 2023, summa cannister sampling recorded benzene concentrations at  $185.02 \mu\text{g}/\text{m}^3$  and  $89.32 \mu\text{g}/\text{m}^3$  in two separate locations at the Plant’s fenceline. Exhibit 13, Shell, Continuous Air Monitoring System (“CAMS”) Photoionization Detector Concentration Data and Summa Canister Analytical Laboratory Results for April 11, 2023.

#### **VIOLATIONS OF THE CLEAN AIR ACT AND PENNSYLVANIA AIR POLLUTION CONTROL ACT**

242. A violation of the Plan Approvals is a violation of the CAA and APCA because the Plan Approvals were issued pursuant to a SIP approved by EPA, and Plaintiff may enforce violations of the conditions of the Plan Approvals under the citizen suit provisions of the CAA and APCA. 42 U.S.C. § 7604(f); 35 P.S. § 4013.6(c).

243. The violations are ongoing. Each type of violation alleged in the First, Second, Third, Fourth, Fifth, Six, Seventh, and Eighth Claims for Relief occurred more than once and therefore was “repeated” within the meaning of 42 U.S.C. § 7604(a)(1).

244. The COA does not address at all, or does not fully address, the violations alleged in the First, Second, Third, Fourth, Fifth, Sixth, Seventh, and Eighth Claims for Relief, and does not require Shell to take the actions necessary to ensure Shell operates the Plant in compliance with its Plan Approvals and the requirements of the CAA and APCA.

**FIRST CLAIM FOR RELIEF**  
**(Violations of Site-Wide, 12-Month Rolling VOC Emission Limitation)**

245. Paragraphs 1–244 are re-alleged and incorporated by reference.

246. Defendant’s Plan Approval PA-04-00740C, Section C, Condition No. 005 imposes a site-wide, 12-month rolling emissions limitation of 516.2 tons of VOCs from the Plant. The Plant must comply with this limit at all times.

247. Based on Shell’s self-reported emissions submitted to DEP and subject to a reasonable opportunity for investigation and discovery, the Defendant emitted at least the following amounts of VOCs during the 12-month periods ending between September 2022 through August 2023:

<b>Month</b>	<b>VOC Emissions (tons/month)</b>	<b>VOC Emissions (tons/12-month period)</b>
September 2022	512.203	522.982
October 2022	143.852	666.296
November 2022	74.318	739.528
December 2022	26.54	764.343
January 2023	25.601	789.944
February 2023	27.187	817.131
March 2023	23.031	840.159
April 2023	19.156	854.462
May 2023	19.787	872.791
June 2023	53.694	924.090
July 2023	49.918	969.210
August 2023	22.453	989.451

Exhibits 7, 7-1.

248. The monthly VOC emissions for September 2022 through December 2022 in Paragraph 247 are the monthly VOC emissions reported by Shell prior to the monthly period ending on January 31, 2023. Exhibit 7.

249. For the monthly period ending November 30, 2022, Defendant reported site-wide twelve-month rolling VOC emissions for September 2022 as 522.982 tons; October 2022 as 666.296 tons; and November 2022 as 739.528 tons. Exhibit 7.

250. The monthly VOC emissions reported by Shell for at least January 2023, February 2023, and March 2023 in Paragraph 247 are the monthly VOC emissions reported by Shell in the report for the monthly period ending on March 31, 2023. *Id.* Therefore, the VOC emissions reported by Shell for the first three months of 2023 are likely an underestimate of actual emissions because Shell began calculating VOC emissions from flares using a DRE of 99.55% for the monthly period ending on January 31, 2023. Exhibit 8.

251. The 12-month VOC emissions in Paragraph 247 for the periods ending between September 2022 and March 2023 are calculated using the monthly VOC emissions reported by Shell to DEP on December 19, 2021. Exhibit 7.

252. The monthly and 12-month VOC emissions for April 2023 through August 2023 in Paragraph 247 are the monthly VOC emissions reported by Shell for the monthly period ending on August 31, 2023. Exhibit 7-1.

253. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on a one-hour test for one flare.

254. Shell has not demonstrated that it is reducing collected VOC emissions from flares by 98%.



255. Shell emitted VOCs in excess of the site-wide, 12-month VOC emission limitation in at least twelve 12-month periods ending in September 2022, October 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, and August 2023.

256. Each day of each of the 12-month periods with total emissions in excess of the emission limitation constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

257. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this First Claim for Relief will continue.

**SECOND CLAIM FOR RELIEF**  
**(Violations of Site-Wide 12-Month Rolling NO<sub>x</sub> Emission Limitation)**

258. Paragraphs 1–244 are re-alleged and incorporated by reference.

259. Defendant’s Plan Approval PA-04-00740C, Section C, Condition No. 005, imposes a site-wide, 12-month rolling emission limitation of 328.5 tons of NO<sub>x</sub>. The Plant must comply with this limit at all times.

260. Based on Shell’s self-reported emissions submitted to DEP, the Plant emitted at least the following amounts of NO<sub>x</sub> during the 12-month periods ending between December 2022 and September 2023:

<b>Month</b>	<b>NO<sub>x</sub> Emissions (tons/month)</b>	<b>NO<sub>x</sub> Emissions (tons/12-month period)</b>
December 2022	28.119	343.685
January 2023	28.293	368.829
February 2023	28.694	393.893
March 2023	30.608	420.356
April 2023	24.432	441.757
May 2023	17.748	454.102
June 2023	29.459	475.778
July 2023	29.995	496.156
August 2023	26.997	495.646
September 2023	27.416	366.155

Exhibits 7, 7-1.

261. The monthly and 12-month NO<sub>x</sub> emissions for December 2022 through March 2023 in Paragraph 260 are the NO<sub>x</sub> emissions reported by Shell for the monthly period ending on April 30, 2023. Exhibit 7.

262. The monthly and 12-month NO<sub>x</sub> emissions for April 2023 through August 2023 in Paragraph 260 are the NO<sub>x</sub> emissions reported by Shell for the monthly period ending on August 31, 2023. Exhibit 7-1.

263. The monthly and 12-month NO<sub>x</sub> emissions for September 2023 in Paragraph 260 are the NO<sub>x</sub> emissions reported by Shell for the monthly period ending on September 30, 2023. Exhibit 7-1.

264. Shell emitted NO<sub>x</sub> emissions in excess of the site-wide, 12-month emission limitation in at least ten 12-month periods ending December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023, and September 2023.

265. Each day of each 12-month period with total emissions in excess of the permitted 12-month rolling NO<sub>x</sub> limit constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

266. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Second Claim for Relief will continue.

**THIRD CLAIM FOR RELIEF**  
**(Violations of Site-Wide 12-Month Rolling HAPs Emission Limitation)**

267. Paragraphs 1–244 are re-alleged and incorporated by reference.

268. Defendant's Plan Approval PA-04-00740C, Section C, Condition No. 005, imposes a site-wide, 12-month rolling emission limitation of 32 tons of HAPs. The Plant must comply with this limit at all times.

269. Based on Shell's self-reported emissions submitted to DEP, the Plant emitted at least the following amounts of HAPs during the 12-month periods ending between December 2022 and September 2023.

<b>Month</b>	<b>HAP Emissions (tons/month)</b>	<b>HAP Emissions (tons/12-month period)</b>
December 2022	1.901	32.936
January 2023	2.859	35.568
February 2023	4.785	40.054
March 2023	2.877	42.578
April 2023	2.488	44.892
May 2023	1.373	45.979
June 2023	3.919	49.581
July 2023	4.894	54.139
August 2023	3.093	56.828
September 2023	1.537	43.367

Exhibit 7-1.

270. The monthly and 12-month HAP emissions for December 2022 through August 2023 in Paragraph 269 are the HAP emissions reported by Shell for the monthly period ending on August 31, 2023. Exhibit 7-1.

271. The monthly and 12-month HAP emissions for September 2023 in Paragraph 269 are the HAP emissions reported by Shell for the monthly period ending on September 30, 2023. Exhibit 7-1.

272. Shell emitted HAPs emissions in excess of the site-wide, 12-month emission limitation in at least ten 12-month periods ending December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023, and September 2023.

273. Each day of each 12-month period with total emissions in excess of the permitted 12-month rolling HAPs limit constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

274. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Third Claim for Relief will continue.

**FOURTH CLAIM FOR RELIEF**  
**(Violations of Site-Wide 12-Month Rolling CO Emission Limitation)**

275. Paragraphs 1–244 are re-alleged and incorporated by reference.

276. Defendant’s Plan Approval PA-04-00740C, Section C, Condition No. 005, imposes a site-wide, 12-month rolling emission limitation of 983.7 tons of CO. The Plant must comply with this limit at all times.

277. Based on Shell’s self-reported emissions submitted to DEP, the Plant emitted at least the following amounts of CO during the 12-month periods ending between February 2023 and September 2023:

<b>Month</b>	<b>CO Emissions (tons/month)</b>	<b>CO Emissions (tons/12-month period)</b>
February 2023	78.278	1058.696
March 2023	88.164	1146.522
April 2023	83.749	1229.476
May 2023	56.410	1281.575
June 2023	75.618	1349.041
July 2023	63.347	1396.089
August 2023	66.459	1377.472
September 2023	69.188	1029.573

Exhibit 7-1.

278. The monthly and 12-month CO emissions for February 2023 through August 2023 in Paragraph 277 are the CO emissions reported by Shell for the monthly period ending on August 31, 2023. Exhibit 7-1.

279. The monthly and 12-month CO emissions for September 2023 in Paragraph 277 are the CO emissions reported by Shell for the monthly period ending on September 30, 2023. Exhibit 7-1.

280. Shell emitted CO emissions in excess of the site-wide, 12-month emission limitation in at least eight 12-month periods ending February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023 and September 2023.

281. Each day of each 12-month period with total emissions in excess of the permitted 12-month rolling CO limit constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

282. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Fourth Claim for Relief will continue.

**FIFTH CLAIM FOR RELIEF**  
**(Violations of Prohibition on Visible Emissions from Flares)**

283. Paragraphs 1–244 are re-alleged and incorporated by reference.

284. Defendant’s Plan Approval PA-04-00740C, Section D, Source 205 Condition No. 001 provides that “[v]isible emissions . . . shall not exceed 0% except for a total of five minutes during any consecutive two-hour period” from the Plant’s high-pressure ground flares and emergency elevated flare.

285. Defendant’s Plan Approval PA-04-00740C, Section D, Source 204 Condition No. 001 provides that “[v]isible emissions . . . shall not exceed 0% except for a total of five minutes during any consecutive two-hour period” from the Plant’s multipoint ground flare.

286. Under the CAA, “flares shall be designed for and operated with no visible emissions . . . except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.” 40 C.F.R. § 60.18(b)(1).

287. The Defendant released visible emissions from the Plant’s high-pressure elevated emergency flare for more than 5 minutes during any 2 consecutive hours on the following days:

Date	Duration
September 8–10, 2022	9 minutes
September 18, 2022	15 minutes
September 21–22, 2022	7.5 minutes
October 24–26, 2022	11 minutes
February 13, 2023	2 hours, 45 minutes
July 10, 2023	11 minutes

Exhibit 1 at Exhibit D; Exhibit 14, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *Re: PA-04-00740C Ethane Cracking Unit (Source ID 201) Cracked Gas Compressor Upset Event and High-Pressure (HP) Header System (Source ID 205) Excess Emission Report* (Mar. 15, 2023); Exhibit 15, Photos of High-Pressure Elevated Emergency Flare, Breathe Cam, *Shell Plastics West* (Oct. 24, 2022 14:45:33 and Feb 13, 2023 16:12:24), available at <https://breathecam.org/>; Exhibit 22.

288. The Defendant released visible emissions from the Plant’s high pressure enclosed ground flares for more than 5 minutes during any 2 consecutive hours on the following days:

Date	Duration
September 6, 2022	Intermittent
September 8, 2022	Intermittent
September 13, 2022	7 minutes

February 13, 2023	At least 28 minutes
March 24, 2023	4 hours, 53 minutes, 20 seconds
March 25, 2023	27 minutes, 15 seconds
March 25, 2023	40 minutes, 10 seconds

Exhibit 1 at Exhibit D; Exhibit 16, Pennsylvania Department of Environmental Protection, Emergency Response Incident Report (Feb. 13, 2023); Exhibit 17, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *April 2023 Monthly Submittal of Information Requested from Shell Chemical Appalachia LLC* (Apr. 21, 2023); Exhibit 22.

289. The Defendant released visible emissions from the Plant's multi-point ground flare for more than 5 minutes during any 2 consecutive hours on the following days:

Date	Duration
June 23, 2022	11 minutes
July 10, 2023	6 minutes, 3 seconds
August 3, 2023	5 minutes, 57 seconds
September 2, 2023	14 minutes, 12 seconds
October 11, 2023	8 minutes, 13 seconds

Exhibit 1 at Exhibit D; Exhibit 22.

290. Shell violated the Plan Approval, CAA, and APCA when the Plant released prohibited visible emissions from the high-pressure elevated flare, high-pressure ground flare, and multi-point ground flare.

291. Each two-hour period in which the Plant emitted visible emissions from flares or incinerators for more than five minutes is a separate violation of the Plan Approval, the CAA and the APCA.

292. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Fifth Claim for Relief will continue.

**SIXTH CLAIM FOR RELIEF**  
**(Violation of Limit on Total Annual Benzene in Facility Waste)**

293. Paragraphs 1–244 are re-alleged and incorporated by reference.

294. Defendant’s Plan Approval PA-04-00740C, Section C, Condition No. 008 provides that “total benzene quantity from facility waste shall not equal or exceed 11 tons per year as determined through 40 CFR § 61.355[.]” Exhibit 5-1. The Plan Approvals impose this limit “for the purpose of compliance” with the BWON rules. *Id.*

295. Shell is generating 59.22 Mg/yr of benzene in its waste and wastewater in violation of the Plan Approval. Exhibit 21 at Exhibit C.

296. Shell violated the Plan Approval, CAA, and APCA when Shell generated benzene from facility waste at the Plant in excess of the permitted limit.

297. Each day of each annual period in which Shell generates total benzene from facility waste in excess of the permitted annual limit constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

298. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Sixth Claim for Relief will continue.

**SEVENTH CLAIM FOR RELIEF**  
**(Violation of Benzene Waste Operation NESHAP, Subpart FF, Violation of Plan Approval Provisions that Require Compliance with Subpart FF)**



299. Paragraphs 1–244 are re-alleged and incorporated by reference.

300. Shell’s Plant is subject to the NESHAP for Benzene Waste Operations (“Subpart FF”). 40 C.F.R. §§ 61.340, 63.1102(2), 63.1103(3)(g), 63.1093, 63.1091, Exhibit 5-1 at Section C, No. 045.

301. Shell’s Plant is subject to the Generic MACT and Ethylene Manufacturing Process Units category NESHAPs. 40 C.F.R. §§ 63.1102(2), 63.1103(3)(g), 63.1093, 63.1091, Exhibit 5-1, at Section C, No. 23.

302. The Shell Plant is a “chemical manufacturing plant” and a “facility” within the meaning of 40 C.F.R. § 61.341.

303. The Shell Plant produces ethylene and operates ethylene production units within the meaning of 40 C.F.R. § 63.1103(2) and 40 C.F.R. § 63.1093.

304. At all relevant times, Shell has had a total annual benzene quantity greater than or equal to 10 Mg/year as determined by the procedures set forth in 40 C.F.R. § 61.342(a). Exhibit 21 at Exhibit C; Exhibit 26; Exhibit 29.

305. Shell was required to comply with the NESHAP for Benzene Waste Operations as of the date of the initial startup of the ethylene production unit. 40 C.F.R. § 61.342(b); Exhibit 23.

306. Shell was required to comply with the Generic MACT and Ethylene Manufacturing Process Units category NESHAPs as of the date of the initial startup of the ethylene production unit.

307. On April 18, 2023, Shell elected to comply with the 6.0 Mg/year, also known as the 6 BQ Compliance Option, set forth in 40 C.F.R. § 61.342(e) at the Shell Plant. Exhibit 21 at Exhibit C.

308. Prior to April 18, 2023, Shell did not identify how Shell would comply with Subpart FF requirements for facilities with a TAB greater than 10 Mg/year. *Id.*

309. Shell failed to accurately calculate the total annual benzene quantity for the Shell Plant by omitting at least 9 waste streams and 59.16 Mg/year from its benzene waste stream inventory in violation of 40 C.F.R. §§ 61.355(a)-(c), (k), 61.357(d) and its Plan Approval. Exhibit 21 at Exhibit C; Exhibit 26.

310. Shell has failed to provide “sufficient information to document the flow-weighted annual average benzene concentration of each waste stream” for purposes of calculating the TAB as required by 40 C.F.R. § 61.355(c)(2). Exhibit 21 at Exhibit C; Exhibit 26.

311. Since the initial startup of the ethylene production unit, Shell has failed to comply with Subpart FF provisions for facilities with a TAB greater than 10 Mg/year that require the treatment and control of benzene wastes and emissions as required by 40 C.F.R. §§ 61.342(c) – (f), 61.343 - 61.349. ¶¶ 195-241.

312. Shell failed to timely conduct at least an initial and quarterly visual inspections of the Spent Caustic Stripper, Process Water Stripper, and the Spent Caustic Vent Incinerator, as required by 40 C.F.R. § 61.357(d)(6). Exhibit 29 at 4.

313. Shell failed to timely submit at least two quarterly reports related to compliance with Subpart FF, as required by 40 C.F.R. § 61.357(d)(7). *Id.*

314. Shell’s failure to comply with the NESHAP for Benzene Waste Operations is a violation of the Plan Approval, CAA, and APCA.

315. Each day and each violation of the applicable BWON rules constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

316. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Seventh Claim for Relief will continue.

**EIGHTH CLAIM FOR RELIEF**  
**(Violation of Requirement to Operate and Maintain Sources in  
Accordance with Specifications in Permit Application)**

317. Paragraphs 1–244 are re-alleged and incorporated by reference.

318. Defendant’s Plan Approval PA-04-00740C, Section B, Condition No. 013 provides that “A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department.” Exhibit 5-1.

319. Shell is required to operate the Shell Plant “in accordance with the specifications in the [Plan Approval] application.” Exhibit 5-1.

320. Shell’s application for Plan Approval PA-04-00740A states that “Shell will comply with the provisions of 40 CFR 61 Subpart FF by being exempt because Shell will design and operate the facility such that the total annual benzene quantity from the facility waste will be less than 11 tons per year (i.e., 10 mega grams) for the facility.” Exhibit 21 at Exhibit A.

321. Shell is generating 59.22 Mg/year of benzene in its waste and wastewater in violation of Condition No. 13 of the Plan Approval. Exhibit 21 at Exhibit C.

322. Shell’s failure to operate and maintain the Plant in accordance with the specifications provided in Shell’s application for the Plan Approvals regarding TAB is a violation of the Plan Approval, the CAA, and the APCA.

323. Each day in which Shell fails to operate and maintain the Plant in accordance with the specifications provided in Shell's application for the Plan Approvals regarding TAB constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

324. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Eighth Claim for Relief

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that this Court:

A. Declare that Defendant Shell has violated, and is currently in violation of, the Clean Air Act, the Pennsylvania Air Pollution Control Act, and its Plan Approvals;

B. Order the Defendant to take all actions necessary to operate the Plant in compliance with its Plan Approvals and the requirements of the CAA and the APCA;

C. Permanently enjoin Defendant from operating the Plant except in compliance with its Plan Approvals and the requirements of the CAA and the APCA;

D. Order Defendant to take other appropriate actions, including beneficial mitigation projects authorized under the Clean Air Act, 42 U.S.C. § 7604(g)(2), to remedy, mitigate, and offset the harm to public health and the environment caused by the violations alleged above;

E. Assess a civil penalty against Defendant for each violation of the CAA up to \$117,468 per day, per violation pursuant to 42 U.S.C § 7413(b) and 40 C.F.R. § 19.4;

F. Assess a civil penalty against Defendant for each violation of the APCA up to \$25,000 per day, per violation pursuant to 35 P.S. § 4009.1(a);

G. Retain jurisdiction to ensure compliance with its decree;

H. Award Plaintiff its reasonable costs and attorneys' fees as authorized by 42 U.S.C § 7604(d); and

I. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted on this 12th day of December 2023,

/s/ Sarah Kula

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**CERTIFICATE OF SERVICE**

I hereby certify that, on December 12, 2023, a copy of Plaintiff's Amended Complaint For Declaratory and Injunctive Relief was electronically filed and served via the Court's ECF system in accordance with the Rules of the United States District Court for the Western District of Pennsylvania to all counsel of record.

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